REMARKS

In an Office Action mailed on August 30, 2006, objections were made to claims 18 and 25; claims 1-3, 7-16 and 20-30 were rejected under 35 U.S.C. § 102(b) as being anticipated by Cernocky; and claims 4-6, 7-19 and 31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Cernocky in view of Harmon. Regarding the objections to claims 18 and 25, claim 18 has been cancelled; and the status identifier has been added to claim 25. Therefore, withdrawal of the claim objections is requested. The claim amendments incorporate dependent claim limitations, which have been previously considered by the Examiner. Therefore, Applicant respectfully requests entry of the claim amendments. The §§ 102 and 103 rejections are addressed below.

Rejections of Claims 1 and 7-13:

Limitations from dependent claims 4-6 have been incorporated into independent claim 1. Therefore, the § 103 rejections of claims 4-6 in view of Cernocky and Harmon are addressed below.

As amended, the method of independent claim 1 recites communicating a wireless stimulus downhole in a well and actuating a casing conveyed perforating gun response to the communication. The method includes communicating another wireless stimulus from a transmitter that is integrated with a casing string uphole to confirm firing of the perforating gun.

Contrary to the limitations of amended independent claim 1, Cernocky does not disclose any uphole communication from its disclosed perforating devices and thus, also fails to teach or suggest communicating a wireless stimulus from a transmitter integrated with a casing string uphole to confirm firing of a perforating gun.

Harmon fails to teach or suggest the missing claim limitations for at least the following reasons. Although Harmon discloses seismic receivers 115 that "listen" to a seismic response from a perforating gun for purposes of detecting whether the gun has fired (Harmon, 11:40-57), Harmon fails to teach or suggest a transmitter that is integrated with a casing string to transmit a stimulus uphole to confirm firing of a perforating gun. Instead, Harmon is specific that a technique of "listening" for the seismic signal that is generated by the firing of the perforating gun is used to detect firing of its perforating gun. Furthermore, although in lines 57-61 in column 11 of Harmon, Harmon describes a seismic signal generator that may be in the borehole with the device, this generator is disclosed for downhole device other than a perforating gun.

Thus, Harmon would lead one of skill in the art away from deploying a transmitter downhole and integrating such with a casing string for purposes of indicating firing of a perforating gun. Additionally, there is no teaching or suggestion in Harmon regarding integrating the disclosed seismic signal generator in a casing string. As such, there is no suggestion or motivation to modify Cernocky in view of Harmon to derive the specific claim limitations, such as communicating a wireless stimulus uphole from a transmitter that is integrated with a casing string to confirm firing of a perforating gun.

Therefore, Applicant submits that amended independent claim 1 is patentable in view of the cited art.

Claims 7-13 are patentable for at least the reason that these claims depend from an allowable claim.

Rejections of Claims 14, 16 and 20-26:

As amended, the system of independent claim 14 includes a casing conveyed perforating gun that is located downhole in a well and an apparatus to communicate a wireless stimulus downhole to the perforating gun to actuate the perforating gun; and a transmitter that is integrated with a casing string to transmit a wireless stimulus uphole to indicate firing of the perforating gun.

See discussion of independent claim 1 above. In particular, the combination of Cernocky and Harmon fails to teach or suggest the limitations of amended claim 14. For example, neither Harmon nor Cernocky teaches or suggests a transmitter to communicate a wireless stimulus uphole to indicate the firing of a perforating gun. Furthermore, Harmon, which the Examiner relies on for the teaching of communicating a stimulus uphole, fails to teach or suggest integrating a device with a casing string. Therefore, for at least any of these reasons, Applicant requests allowance of amended claim 14. Claims 16 and 20-26 are patentable for at least the reason that these claims depend from an allowable claim.

Rejections of Claims 27, 29 and 30:

As amended, claim 27 now recites a perforating gun, which includes perforating charges that are adapted to be embedded in a casing string section. The perforating gun includes a mechanism, which is adapted to respond to a wireless stimulus that is transmitted from a surface

of the well to fire the perforating charges. The perforating gun also includes a transmitter that is embedded in the casing string section to communicate another wireless stimulus uphole to confirm firing of the perforating charges.

See discussion of independent claim 1 above. In particular, the combination of Cernocky and Harmon fails to teach or suggest the transmitter of claim 27, a transmitter that is integrated with a casing string to communicate a wireless stimulus uphole to confirm firing of perforating charges of a perforating gun. Therefore, for at least this reason, Applicant requests allowance of amended independent claim 27. Claims 29 and 30 are patentable for at least the reason that these claims depend from an allowable claim.

CONCLUSION

In view of the foregoing, withdrawal of the §§ 102 and 103 rejections and a favorable action in the form of a Notice of Allowance are requested. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 20-1504 (SHL.0318US).

Respectfully submitted,

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